REMARKS

Claims 1-22, 28-34 and 36-51 are pending in this application. Claims 1-22, 28-34 and 36-51 are rejected. Reconsideration of the claims is requested in light of the following remarks.

Claim Rejections – 35 USC § 103

Applicant has amended claims 1, 28, and 48 and has added new dependent claims 52-54, which depend from claim 1, and 55-57, which depend from claim 28. Even though some of the claims are amended, applicant respectfully traverses the rejection of all of the claims on the prior art.

The rejections are improper for several reasons. First, Stam *et al.* does not disclose "a display device (100)," as characterized by the Examiner on page 12 of the April 6, 2006 Office Action. On the contrary, "FIG. 1 depicts a lamp assembly 100 . . ." P. 2, ¶ 25, Stam *et al.* This published application is titled *Lamp Assembly Incorporating Optical Feedback.* The background of the invention describes these lamps as being "for use in automobiles and other applications. Many of these applications require a substantially white colored illumination when providing light for tasks such as, for example, reading a map or book." P. 1, ¶ 3, Stam *et al.*

Because the entire disclosure of this reference deals with lamps for illuminating objects, this is not relevant prior art. Admittedly, both the reference and the claimed invention use with LEDs, but applicant submits that an inventor of digital displays who is trying to control display brightness would not look to LEDs used for illumination for a solution.

But even assuming for the sake of argument that Stam *et al.* is relevant, the rejection is still improper. Granted, the reference discloses a two-sentence description of an embodiment in which an LED is used as a detector: "In another embodiment, one of the LEDs 101, 102 or 103 may actually be used as detector 106. For example, one of LEDs 101 can be reverse-biased and operated as a photodiode to detect light form other LEDs 101 of the same color." P. 3, ¶ 36, Stam *et al.*

Note that this brief reference gives no indication that the LED in question is to be used in any way other than as a detector. There is no discussion or suggestion of changing an individual LED between light sensing and emitting modes—only that an LED may be used as a detector by reverse biasing. And the Cok *et al.* reference, which the Examiner combines with Stam *et al.* to reject claim 1 does not cure this defect. Cok *et al.* discloses a

representative pixel 20 and a separate photosensor 21, which detects light emitted from the representative pixel.

Even though this rejection is traversed for the above reasons, applicant has amended claim 1 to clarify the scope of the invention. In contrast to both cited references, the LEDs in applicant's digital display system form a display panel for displaying a digital image. Although Cok *et al.* discloses such a panel, neither representative pixel 20 nor photosensor 21 are used to create a portion of the digital image on the display panel in any mode of operation. Further, neither reference discloses or suggests any structure that might permit adjustment of the brightness of an LED in response to the amount of light sensed by that LED. Even if Stam *et al.* could somehow be considered a digital display instead of a lamp and even if it disclosed switching between sensing and emitting modes, both of which statements applicant disputes, there is no suggestion of adjusting brightness of an LED in response to the amount of light sensed by that LED. Nor is there a hint of how this might happen.

Applicant has added new claims 52-54 that depend from claim 1 and further specify the invention. Claim 53 includes a memory for storing a value related to the brightness of the light sensed when one of the diodes is in a sense mode. And claim 54 describes use of this stored value by the feedback controller to adjust the brightness of the LED.

Stam *et al.*, on the other hand, discloses shining a reference light on the detector during a manufacturing calibration and storing a constant related to the detector response in a ROM. It further discloses analyzing the light output of the LEDs, also during manufacture, with a spectrometer and storing calibration constants so derived in ROM. This is different from storing detected values during operation of the digital image display system as claimed.

Claim 28 stands rejected in view of Stam *et al.* and Mueller *et al.* Applicant has amended claim 28 in a manner similar to claim 1. While Mueller *et al.* does indeed disclose driving LEDs using pulse width modulation, it does not disclose configuring a second percentage of a duty cycle for measuring light shining on the diodes. Again, Stam *et al.* does not even disclose switching between emitting and sensing modes—only using a diode as a sensor. But even if it did, there is no suggestion in either reference to drive diodes to show an image during a first percentage of a duty cycle and to use the diodes to sense energy during a second percentage of the duty cycle.

As a result, applicant requests reconsideration of claim 28, as amended. New claims 55-57 depend from claim 28 and include limitations similar to claims 52-54. Support for the

claim 55 limitation of *several thousand times per second* may be found in the application at page 9, line 17.

Applicant traverses the rejection of claim 46, which is not amended. As discussed above, neither Stam *et al.* nor Cok *et al.* discloses a data storage unit that stores data signals indicative of energy sensed by diodes during sensing modes that occur between emitting modes. Applicant has nonetheless amended the claims to further clarify this distinction. A switch switches the diodes between sensing and emitting modes and when the diodes are in the sensing mode, they generate data signals indicative of energy sensed by the diodes. Applicant also requests reconsideration of claim 46 as amended.
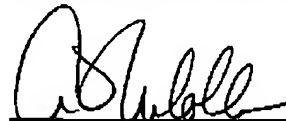
Claim 48 has been amended in a manner similar to claims 1 and 28 and further incorporates new limitations including a memory that stores a value related to the brightness of the light sensed when the diode is in the sense mode. And the brightness of the LED is adjusted in response to the light sensed by the LED. Reconsideration is requested.

CONCLUSION

For the foregoing reasons, reconsideration and allowance of all remaining claims of the application is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office via facsimile number (571) 273-8300, on June 26, 2006.

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